

## artdaq - Idea #6166

### Think about ways to incorporate an external request to the EventBuilders for a specific time window

05/05/2014 01:20 PM - Kurt Biery

<b>Status:</b>	Closed	<b>Start date:</b>	05/05/2014
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Eric Flumerfelt	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	40.00 hours
<b>Target version:</b>	v2_00_00		
<b>Experiment:</b>			
<b>Description</b>			
<p>In the NOvA DAQ system, the BufferNodeEVB processes keep all of the data in memory for some period of time to allow spill triggers to travel from Fermilab to Ash River. The spill trigger is just one of several types that the NOvA DAQ supports where the GlobalTrigger processes sends a request for a specific time window to the BufferNodes, and the BNEVB process(es) send the requested data to the DataLogger.</p> <p>This model is somewhat orthogonal to what is currently supported in <i>artdaq</i>. In <i>artdaq</i>, events are accepted or rejected based on the <i>art</i> filter modules that are configured in the EventBuilder processes. There is currently no support for an external request for a specified time window's worth of data to be accepted by an EventBuilder process.</p> <p>However, it is likely that we will need to support both internal filtering decisions and external requests for specific time windows in the future (e.g. LBNE). As such, we should investigate what it would take to add external "triggering" to <i>artdaq</i>.</p> <p>The initial time estimate for this is just for some initial discussions; more time will need to be added once we understand the scope of the changes that will be needed.</p>			

#### History

##### #1 - 01/11/2017 10:20 AM - Eric Flumerfelt

- Status changed from New to Closed
- Assignee set to Eric Flumerfelt
- Target version changed from 577 to v2\_00\_00

Primary implementation for this functionality was present in *artdaq* v1\_13\_03. CommandableFragmentGenerators can receive a data request and will respond with data that corresponds to the timestamps in the request. In *artdaq* v2\_00\_00, additional functionality was introduced which increases the potential for NOvA-like "out of band" data requests.